Estimated Costs of Digital Audio/Video Recording Technology (DART) For Use in Trial Courts

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A. Overview

Almost all courtroom digital recording systems that are managed through the use of a courtroom PC have certain key hardware components – regardless of the vendor. The "vendors" that conducted presentations for the committee were all primarily developers of software solutions for the management of digital recording systems in individual courtrooms and/or at a regional or statewide (i.e., enterprise) level.

DART Hardware Components in the Courtroom

The hardware components are typically standard high quality equipment from name-brand manufacturers. Naturally, each component can vary in quality, features, and price:

1. **Microphones** – Each courtroom needs four to eight microphones strategically placed to meet the needs of a given courtroom. High quality microphones are critical to meeting the need for complete and clear recordings in court.
2. **Audio mixer** (The microphones are plugged into the mixer.) – This is another critical component of any DART system. The mixer determines how many inputs (e.g., microphones) can be accommodated and, therefore, how many "tracks" can be recorded (from 4 to 12). Some vendors use off-the-shelf audio mixers from well-known manufacturers. Others develop their own mixers, usually through a partnership with a well-known manufacturer (e.g., JAVS developed its own, which is manufactured by Marantz).
3. **Computer & monitor** (The mixer is plugged into a courtroom PC or laptop.) This is typically industry standard equipment (e.g., HP, Dell, etc.) with a certain level of processor, hard drive, and a high quality sound card or video card.
4. **Recording storage media** – In many or most courtroom systems, one copy of the recording of the courtroom proceedings goes onto the PC hard drive. It could also be directed to an external hard drive in the courtroom or someplace else in the courthouse, to a network drive, or to any two of these. In some places, court staff download/backup the recordings to a CD/DVD at the end of each day or week. [We can avoid this by backing up recordings to a central network storage unit.]

DART Management Software

This is a *key component that distinguishes the various vendors*

1. A management screen provides visual indicators to monitor each microphone
2. Determines how many tracks can be recorded (from 4 to 12); tracks can be isolated by a transcriptionist so she or he can listen to what was said on only one of the microphones – or listen to all of them simultaneously.

3. Typically allows for annotation of the audio/video recording (e.g., case name & number; persons who speak; etc.); annotations are searchable – allowing quick access to a particular place/time on the recording
4. Allows configuration of where/how the recording will be directed, saved, and backed-up
5. Provides options for setting security parameters for recordings (e.g., sealing the recording)
6. Other enhancements might vary – contributing to what distinguishes the various vendors' software

DART Components for <u>Central</u> Backup and Archival

In addition to the recording equipment and software in the courtroom, digital recording systems can also include hardware (e.g., computers, monitors, servers, data lines, and related cabling) and software that allow for centralized (regional or statewide) monitoring of daily courtroom recordings and management of the backup and archiving of recordings. Some vendors refer to this as "enterprise" management (versus single courtroom management) of digital recording systems. Since Iowa already has a statewide court information system (ICIS) and the network to support it, it probably makes sense to consider the "enterprise" level management of digital recordings, if the courts move in this direction. All the vendors claim they can provide the software and hardware capability to provide enterprise-level management, though some clearly have more expertise in this area than others. This is one of the critical areas in which differences emerge among the vendors. Looking only at the costs for courtroom equipment and software could lead to underestimating the equipment costs of an enterprise-level approach.

Central backup and archival will also require data/recording storage equipment and equipment for moving the recordings from the central storage units to a permanent or longer-term archival (e.g., DVD or Blu-Ray disks). The estimates included in Tables 1 and 2 address the need for this type of central storage and archival equipment.

Ongoing Costs for Management and Replacement of Equipment

If Iowa's courts move toward the use of DART, the costs for ongoing management, technical assistance, and periodic replacement of the equipment must be included in the analysis. Again, Tables 1 and 2 include these factors in the costs estimates.

B. Cost Estimates

The DART Committee obtained information on costs from the following sources:

- 11 vendors that responded to the committee's Request for Information (RFI) in May,
- Four vendors that did presentations for the DART Committee in June provided further details on their costs (see Attachment 1)
- Surveys completed by court administration staff where the committee conducted site visits

- Various jurisdictions that responded to questions from state court administration staff via telephone conversations

Based on information from these sources, it is clear that the cost to purchase and install a DART system in a single courtroom varies by vendor, the quality of the components, whether the system will record video or audio only, the number of cameras and microphones, the number of tracks/channels to be recorded, and whether the recordings will be monitored and annotated in the courtroom or from a central location.

It would not be helpful to underestimate the costs. Therefore, the Table 1 provides estimates based on mid-level (average to a bit higher) cost estimates, while Table 2 provides somewhat higher level cost estimates for: (A) Initial courtroom installation costs; (B) Initial central/infrastructure installation costs; (C) Total initial purchase and installation costs; and (D) Annual/ongoing management and maintenance costs. The tables are mostly self-explanatory.

See Tables 1 and 2 below:

Table 1
Cost Estimates for Digital Audio/Video Recording Systems
(Mid-Level: $20k audio / $25k video per courtroom)

(Nov. 12, 2009)

Row	A. Initial Courtroom Costs (in all 316 courtrooms)	Audio Only *$20k/Ctrm*	Video *$25k/Ctrm*	
1	Software: Digital records management ($5,000/courtroom)	$1,580,000	$1,580,000	
2	Hardware: Audio only ($15,000/courtroom)	$4,740,000		
3	Hardware: Video recording ($20,000/courtroom)		$6,320,000	
4	**Subtotal: Courtroom Costs**	**$6,320,000**	**$7,900,000**	
	B. Initial Central/Infrastructure Costs			
5	Primary Facility (JB Bldg in DM)	$125,000	$350,000	
6	Disaster Recovery Facility (JFHQ in Johnston)	$125,000	$350,000	
7	DVD-Blu-Ray Recorder/Printer	$40,000	$40,000	
8	Backup storage drive in ea. courthouse: @ $1000/unit)	$100,000	$100,000	
9	Network Upgrades (25 new T1 data lines @ $1000/line)		$25,000	**
10	**Subtotal: Central Infrastructure Costs**	**$390,000**	**$865,000**	
	C. Total Initial Installation Costs (A. + B.)			
11	**Total Estimated Initial Installation Costs (rows 4 + 10)**	**$6,710,000**	**$8,765,000**	
12	*Total Estimated Initial Costs per Courtroom*	***$21,234***	***$27,737***	
	D. Annual/Ongoing Maintenance Costs			
13	4 Technical staff (salary & benefits)	$225,000	$225,000	
14	Annual maintenance (12% of software cost in row 1)	$189,600	$189,600	
15	5-year replacement contribution (20% of hardware cost in row 2 [audio] or row 3 [video])	$948,000	$1,264,000	
16	Monthly fees on 25 new T1 lines: annual cost		$300,000	***
17	**Total Est. Annual Maintenance Costs**	**$1,362,600**	**$1,978,600**	
18	*Total Est. Annual Maintenance Cost per Courtroom*	***$4,312***	***$6,261***	

*Estimates for total software & hardware costs per courtroom for a basic 4-channel DART system:
High Criteria = $7,500; FTR = $10,000; JAVS = $14,000; CourtSmart = $20,000
Alaska's actual costs per courtroom (using CourtSmart software; bought their own hardware) = $23,400

** Add a 2nd T1 data line in 25 of the busiest counties @ $1000 each

*** $1000 monthly fee for the 25 new T1 data lines (25 X 12 X $1000= $300,000)

Table 2
Cost Estimates for Digital Audio/Video Recoding Systems
[Higher-End: $25k audio / $30k video per courtroom]
(Nov. 12, 2009)

Row	A. Initial Courtroom Costs (in all 316 courtrooms)*	Audio Only *$25k/Ctrm**	Video *$30k/Ctrm*	
1	Software: Digital records management ($6,000/courtroom)	$1,896,000	$1,896,000	
2	Hardware: Audio only ($19,000/courtroom)	$6,004,000		
3	Hardware: Video recording ($24,000/courtroom)		$7,584,000	
4	**Subtotal: Courtroom Costs**	**$7,900,000**	**$9,480,000**	
	B. Initial Central/Infrustructure Costs			
5	Primary Facility (JB Bldg in DM)	$125,000	$350,000	
6	Disaster Recovory Facility (JFHQ in Johnston)	$125,000	$350,000	
7	DVD-Blu-Ray Recorder/Printer	$40,000	$40,000	
8	Backup storage drive in ea. Cthouse: @ $1000/unit)	$100,000	$100,000	
9	Network Upgrades (25 new T1 data lines @ $1000/line)		$25,000	**
10	**Subtotal: Central Infrastructure Costs**	**$390,000**	**$865,000**	
	C. Total Initial Installation Costs (A. + B.)			
11	**Total Estimated Initial Installation Costs (rows 6 + 10)**	**$8,290,000**	**$10,345,000**	
12	*Total Estimated Initial Costs per Courtroom*	***$26,234***	***$32,737***	
	D. Annual/Ongoing Management & Maintenance Costs			
13	4 Technical staff (salary & benefits)	$225,000	$225,000	
14	Annual maintenance (12% of software cost in row 1)	$227,520	$227,520	
15	5-year replacement contribution (20% of hardware cost in row 2 [audio] or row 3 [video])	$1,200,800	$1,516,800	
16	Monthly fees on 25 new T1 lines: annual cost		$300,000	***
17	**Total Est. Annual Maintenance Costs**	**$1,653,320**	**$2,269,320**	
18	*Total Est. Annual Maintenance Cost per Courtroom*	***$5,232***	***$7,181***	

*Estimates for total software & hardware costs per courtroom for a basic 4-channel DART system:
High Criteria = $7,500; FTR = $10,000; JAVS = $14,000; CourtSmart = $20,000
Alaska's actual costs per courtroom (using CourtSmart software; bought their own hardware) = $23,400

** Add a 2nd T1 data line in 25 of the busiest counties @ $1000 each

*** $1000 monthly fee for the 25 new T1 data lines (25 X 12 X $1000= $300,000)

Section A: Estimated Initial Courtroom Costs (for all 316 courtrooms)

In Table 1, the mid-level estimate of $20,000 per courtroom for an audio-only system is reasonable given the estimates from each of the four vendors (see the note at the bottom of each table) and the very recent estimate from Alaska ($23,400 per courtroom), knowing that the costs for almost anything in Alaska are higher than in the lower 48 states. The $20,000 figure should fund a configuration a very good system with 5 to 8 microphones recording to separate tracks. The video configuration would involve only 1 or 2 cameras. (See the Black Hawk Co. video recording, which included 2 video cameras: 1 on the judge; 1 on the tables for attorney & parties.)

Although the estimate of $20,000 is on the reasonable for a basic audio-only system, we could certainly spend more than this amount per courtroom – especially for a high-end, "enterprise class" CourtSmart system. We could also spend more than $25,000 per courtroom for a video recording system (see Table 2). JAVS' staff estimated their high-end video recording system could be $40,000 or more per courtroom with a lot of enhanced features. Iowa is unlikely to spend this much in all courtrooms.

The costs for a video system are greater, of course, because it would require a more sophisticated video card in the courtroom computer, cameras and related cabling, much more storage capacity on local and central hard drives/storage devices, and probably significant network bandwidth upgrades via additional T1 lines. Even the basic video system for which cost estimates are provided in Table 1 assume we would have to install additional T1 lines in at least 25 of the busiest counties (see row 5) and pay an ongoing monthly fee of $1000 to support each of them (see row 16).

Section B: Estimated Initial Central Infrastructure Costs

If the Iowa district courts move toward digital recording in all or most courtrooms, it would be most efficient and cost-effective manage the backup and archiving of the digital recordings from a central location. This would include a primary backup server that would be used to manage the daily or weekly backup of all the audio recordings from each county. (See row 1.) This could be automated and done automatically during the evenings or on weekends. (Scott Ruhnke can explain these options.)

Also included is a duplicate backup server (see row 2) to be located at the Joint Force Headquarters (JFHQ) in Johnston, IA, where ICIS maintains its disaster recovery backup system.

A policy decision would have to be made for how long the digital recordings are retained on the primary backup server. We estimate that there would be enough storage capacity to maintain all recordings there for up to 2 years. After that, they would be archived onto high capacity DVD/Blu-Ray disks.[1] The equipment to perform this function is included in Table 1, row 3.

[1] The district courts in Hennepin County (Minneapolis), MN, move their CourtSmart recordings to DVD disks for long-term archival. One member of the DART Committee team that visited Minneapolis noted that they store 3 years of digital audio recordings in a file drawer that is 3 feet wide by 3 feet deep.

Most DART systems direct the initial recording to the hard drive on the PC in the courtroom that manages the digital recording system. A decision will have to be made on where to direct a second/backup copy of the digital recording. There are various options. Table 1 (row 4) assumes that we will add a single large-capacity storage drive in each courthouse where all backup copies would be directed.

Finally, if the decision is made to install video recording systems, there will be a substantially greater need for both storage capacity and bandwidth for transferring the data (video) files from the courthouse to the central server. Consequently, we estimate that approximately 25 of the busier counties will need an additional T1 (high capacity) data line for this purpose. (See row 5.)

Section C: Total Initial Installation Costs (Totals from Sec. A + Sec. B)

Section D: Annual/Ongoing Management & Maintenance Costs

This section estimates the ongoing costs to manage, maintain, and periodically replace DART system hardware. The estimates include costs for:

- Adding 4 full-time tech staff to manage the statewide system (Row 13)
- Annual maintenance on the software (12% of software cost/yr) (Row 14)
- Contribution to a fund to replace equipment every 5 years (Row 15)
- Monthly service/access fees on additional 25 T1 lines (Row 16)

➔*Total estimated annual M & M costs (row 17): Audio-only: $1,362,000 Video: $1,978,600*

➔*Total estimated annual M & M costs per courtroom (row 17/316):*
Audio-only: $4,312 Video: $6,261

See Attachments 1 & 2 below

Attachment 1

Descriptions of the Costs and Features of DART Systems from Five Vendors
(Alphabetical order)

CourtSmart Digital Systems

(Information from presentation to the DART Committee)

Costs per courtroom (*information from presentation to committee on 6-26-09*):

- Basic digital audio system: **$18,000 to $20,000**; includes:
  - Installation by Court Smart technicians
  - 1 year warranty
  - All equipment is high quality, from name-brand manufacturers
    - 5 microphones, cables, wiring
    - audio mixer; sound card
    - camera (if using video)
  - CS software for management and annotations
- Additional features cost more
  - Video ($500 per camera plus wiring & installation)
  - Evidence presentation ($5000)
  - Video conferencing
  - Public address (PA) system ($12,000 - $20,000)
- Annual maintenance/service fee from Court Smart = **12%** of hardware and software purchased from CS (per year); if $20,000 per courtroom – this would equal $2400 per year.
- Excludes: network servers for local/regional backup & archiving, central server (if statewide central management), and cabling that might be necessary to network the servers; nor any upgrades to the network to accommodate backup and archiving audio or video files across the network; nor installation of this additional hardware.
- Replace servers every 3 to 4 years (mission critical equipment)

For the Record, Inc. (FTR)

(Information from the RFI response and presentation to DART Committee)

Costs (assuming a large order)

- Reporter Gold 5.X systems: **$8,000 to $10,000** per courtroom for hardware and software
- Ongoing service & support
  - Software: **5%** of the software purchase price per year
  - Hardware: support provided through local resellers/vendors (varies)

Audio Mixer

FTR provides options for USB (digital) Mixers; one of the following is chosen to meet the requirements of the implementation:

1. DMX8 digital USB automatic mixer (8 channels). Price = **$2,295**
2. DMX4 digital USB automatic mixer (4 channels). Price = $1,655
3. FTR Mixer *software* combination

a. FTR Mixer. Price = **$1,595**
b. USB Microphone Mixer (i.e. M-Audio Fast Track Ultra 8R). Price = **$499**

3. Computer Requirements

A standard MS Windows™ based computer or laptop is required to install the recording software on. The computer will need a PCI analogue-to-digital card to be installed or a USB sound card interface.

Computer Cost = **$800**
Sound Card = **$200**

4. FTR Digital Audio/Video Recording Software

The FTR Gold Reporter 5.X software product will need to be installed on the computer and will provide the recording, note taking, archive, replication, playback and management facilities.

- FTR Gold Reporter 5.X (A/V) Price = **$4295** (Note this includes the following):
  - FTR Gold Recorder 5.X: Digital audio/video recording application
  - FTR Gold Log Notes 5.X : Electronic time stamped log notes application
  - FTR Gold Replicator 5.X : Archiving (Optical, USB drive, network drive) application
  - FTR Gold Player 5.X : Audio/Video content playback

These software applications provide all the functionality required to allow recording, search, retrieval, playback and archiving on a standalone workstation. It also provides the functionality to integrate the capture of the court record into an enterprise wide implementation.

5. Video Recording

The provision of Video Recording requires only the addition of an internal or external video capture card to the recording PC, an appropriate analogue output camera, and interface cabling.

Video Capture Card: **$200**
Camera: **$500**

High Criteria, Inc.

(Information from the RFI response)

Please note, the prices indicated are approximate list prices for a number of potential components. Liberty dealers may source other component brands and may sell for less than the suggested retail price (excluding installation).

• Liberty Court Recording Software:	**$3,395**
• Standard Recording PC with Monitor, mouse and keyboard	$850
• Multi-channel sound card and pre-amp/mixer	$1,299
• Microphones (package of 4)	$1,650
Subtotal (4 channel digital audio only)	***$7,194***

Optional video equipment

Video capture card	$495
Video Camera, power supply, mount, lens and cable	$770

Additional features, equipment and/or software that would enhance the functionality

Expand the number of recording channels (up to 12): $600

The Liberty system can capture the record on 8 or even 12 discrete channels. The ability to utilize more than the traditional 4 channels provides flexibility during larger, complex court sessions. Enabling 8 recording channels comes at an additional list cost of $600 over and above the standard 4 channel configuration. Dealer may sell for less.

Docket import & management: $5000 (or less)

The Liberty system has the ability to integrate with existing docket and case management systems. The docket or case information is imported into the Liberty system. The import ability eliminates the need for reporters to re-type basic case information. The case information becomes associated with a time-stamp in the application that delineates the cases in the recording file and allows for the easy re-cue during playback. The docket import facility is usually provided on a time and material basis. It can usually be completed for less than $5,000. This would be a one-time cost, if the same case management system is used throughout the state.

Case management integration: $1,500

In addition to the ability to import docket and case information, the Liberty system also has a complete programmable interface that can let another program, like a case management system, control the recording system. In some instances, customers have wanted to completely control the recording from various views inside the case management facility. This interface allows for such control. Please note, the use of this facility requires programming in any "controlling" program. Enabling this facility comes with an additional list cost of $1,500. Dealer may sell for less.

Streaming audio capability: $500

The Liberty system has the ability to stream the court sessions directly out of the Liberty Recorder to a media server. Once at the media server, the session might be made available to an authorized list of recipients or alternatively, it could be made available to the Internet where court sessions could be listened to and watched by any member of the public using standard Internet facilities. Enabling the streaming facility comes at an additional list cost of $500. Dealer may sell for less.

Digital courtroom clock: $400

The Liberty system supports the use of industry standard courtroom digital clocks that can indicate to those in attendance at the courtroom that recording is active. The clocks come in a variety of styles and configurations. List costs start around $400. Dealer may sell for less.

Jefferson Audio/Video Systems (JAVS)

(Information from the RFI response)

Basic Digital Audio System: JAVS Precision E4 (Enhanced 4-Track) Technology

***Approximate cost for Precision E4 Audio Only System and Software:* $14,800**

- Includes all hardware & software (installed)

JAVS approach to 4-track recording allows for flexibility unheard of in other 4-track recording systems. In a courtroom, 4 microphones are simply not enough to effectively capture the official record. JAVS Precision E4 provides for at least 4 and up to 8 inputs across our mixer line. This ensures that all relevant zones in a room can be captured to the record and with each microphone paired to an exclusive audio input on the mixer; the JAVS Microphone identification System™ can then authenticate the record.

With microphones clearly identifying themselves, JAVS can effectively route groups of microphones to individual record tracks. The routing is done by means of a matrix switcher conveniently located on the back of the mixer. Nearly any microphone configuration necessary can be grouped and sent to 4 separate direct outputs on the mixer.

The JAVS Enhanced 4-Track process incorporates the industry standard compression of Microsoft Windows Media. The JAVS E4 record can be played on any Windows Media Compatible computer or device. No special codec is required for playback, thus alleviating the necessity to connect to the Internet to download a player that many competitors force users to use. Further, the Microsoft Windows Media format is quickly being voted in as the new SMPTE Standard for the broadcast industry, which means that the recordings JAVS makes today will always be compatible with future technologies.

JAVS Digital Recorders

Proceedings are recorded digitally to the Primary and Secondary recorders using advanced compression technology. The recorders act as servers, allowing any authenticated user access to files from anywhere in the courthouse or network. These files are embedded with a date/time-stamp making them tamper proof. The files are stored as an industry standard Windows Media file, available to anyone with a Windows PC to access without the need for a separate download or special viewer. The digital recorders each allow for over thirty months of on-line audio/video storage and up to sixty months audio only. Compact Discs are created in minutes for transcriptionist or for attorneys to review the day's proceedings. Typical storage rates allow for saving a six hour court day on a single compact disc. Add JAVS **CaseViewer™** software and any logged point of the digital file can be instantaneously accessed and played.

JAVS AutoLog Software

Through JAVS AutoLog case-logging software, the digitally time-stamped courtroom proceedings are linked to any notes or events entered. Each event or instance entered into JAVS AutoLog is stored in the case database. From here JAVS Primary and Secondary Digital Recorders take over, by creating the official audio/video record. Multiple users can make notes and register entries simultaneously and label theses as public or private. Private notes are automatically withheld. The proceedings are digitized and encoded to a non-proprietary digital format (.WMV), making them assessable to anyone with a Windows Media compatible computer or device. Windows Media Encoder encodes the proceedings to an industry standard MPEG-4 standard in order to compress the video. Concerning the audio, high sampling rates guarantees every word is recorded with the utmost clarity. The result is absolute accuracy.

Through JAVS AutoLog the courtroom experience can be finessed. Bench conferences can be configured to broadcast to the jury and gallery, or not. External video sources, such as chambers, remote locations or media presentations can be displayed to courtroom viewers with a click of the mouse.

JAVS AutoLog is fully customizable; featuring hotkeys, exhibit lists and witness lists, the user can produce the record following the directives of the court. Scalable, undockable windows, adjustable text size and a right-click instant review make JAVS AutoLog the most user friendly, customizable logging software available.

Included with JAVS AutoLog is JAVS CaseScheduler software that allows cases to be created and then be scheduled, rescheduled and edited as necessary. Case participants can be tracked in the database; including the Judge, Clerk, Attorneys, Bailiffs, Plaintiffs and Defendants. All of this can be done for the entire courthouse from one location. JAVS CaseScheduler has all the handles and customizations of JAVS AutoLog making it work exactly as the court supervisors dictate.

Additional options:

Cameras: $800 each
PA system w/ 4 speakers: $1400
Video Conferencing: $6500
Video arraignment; remote location stand alone Kiosk: $9500
Chambers Option (w/camera & microphone): $3900
Evidence Presentation Option: $12,000
Large Screen Display Option: $2300
Centralized management/Enterprise option: $70,000 (approx.)

Voice IQ Solutions

(information from response to RFI)

The following price tables are provided without government and volume discounts applied. The **pricing reflects only software provided by VIQ**. *Computer equipment/infrastructure as well as audio/video equipment are not* included. The proposed solutions are compatible with industry standard equipment and open architecture design allowing the client to purchase equipment through existing vendors. VIQ can provide specific recommendations and/or provide component parts as requested in a RFP.

Encompass Pro (VIQ's DART management system)

The following estimated **software** pricing proposition [**excludes hardware costs**] is based on providing a digital recording solution for **300** courtrooms, 10 mid tier servers and one central server.

Description	Unit Price	Estimated #	Extended Price
Recording workstation licenses	$3,999	300	$ 1,199,700
Mid tier server licenses	$4,200	10	$ 42,000
Central Server	$4,999	1	$ 4,999
Playback licenses	$599	150	$89,850
Estimated Total			**$1,336,549**
		⇨	***$4,455 per courtroom for 300 courtrooms***
Annual software support and maintenance 2nd year (approx.)			**$ 27,656**
Options			
NetScribe license -VIQ's Internet based SSL secure transcription access	$25,000	1	$ 25,000
Annual NetScribe user licenses (assumption)	$ 500	10	$ 5,000
AccessPoint --VIQ's Internet based audio search and playback application	$2,500	1	$2,500
On-site training/implementation			$1,000 per day plus per diem/travel costs

VIQ information continued on next page

Encompass RPC (VIQ's solution for courts that seek <u>centralized management</u> of DART)

The following estimated **<u>software</u>** pricing proposition is based on providing a digital recording solution for **<u>300</u>** courtrooms including 10 remote control workstations, 10 mid tier servers and one central server. (**<u>Software only</u>)**

<u>Description</u>	**<u>Unit Price</u>**	**<u>Estimated #</u>**	**<u>Extended Price</u>**
Encompass Satellite workstation licenses	$5,332	10	$ 53,320
Mid tier server licenses	$5,600	10	$ 56,000
Central Server	$6,533	1	$ 6,533
Playback licenses	$599	150	$89,850
Encompass Media Processor licenses	$3,332	300	$999,600
<u>Estimated Total</u>			**<u>$1,205,303</u>**
			⇨ ***<u>$4,018</u> per courtroom***
			For 300 courtrooms

Annual software support and maintenance 2nd year (approx.) $ 24,694

Options (same as for Encompass Pro, above)

Attachment 2

Alaska State Courts: Costs for Digital Recording System in One Courtroom*				
Equipment Name	**Model**	**Price Ea.**	**QTY**	**Total Price**
Lectrosonics DM1612 Digital Matrix Mixer	DM 1612	$3,500.00	1	**$3,500.00**
Lectrosonics PA8 Power Amplifier	PA8	$1,800.00	1	**$1,800.00**
Lectrosonics DMTH4 Digital Telephone Hybrid	DMTH4	$2,000.00	1	**$2,000.00**
Lectrosonics RCWPB8 Wired Telephonics Remote	RCWPB8	$160.00	1	**$160.00**
Middle Atlantic DPPM8-12 19" Pivoting Front Panel Cabinet	DPPM8-12	$110.00	1	**$110.00**
Middle Atlantic Cabinet Cover PPM-LID12	PPM-LID12	$20.00	1	**$20.00**
Middle Atlantic Blank Panel PBL-1 Single Space	PBL-1	$11.00	1	**$11.00**
Middle Atlantic Blank Panel PBL-2 Double Space	PBL-2	$15.00	1	**$15.00**
WireMold Perma Power Rack Mount Power Strip with 8 outlets and a 15' (4.6m) power cord	R5BZ20-15	$70.00	1	**$70.00**
Beyerdynamic M69TG Microphone	M69TG	$300.00	7	**$2,100.00**
OnStage Microphone Stand with Adjustable Shaft	DS7200	$16.00	7	**$112.00**
Hercules Stands Quick-N-EZ Microphone Clip	MH100B	$7.00	7	**$49.00**
TOA Speakers (6 per courtroom)	F2852C	$150.00	6	**$900.00**
Phonic Ear StarSound PE600E Infrared Hearing Assistance Systems	PE600E	$1,044.00	1	**$1,044.00**
Phonic Ear StarSound Stereo Headset Receiver 602R	602R	$86.00	2	**$172.00**
Dell PC (PC, Monitor, Keyboard, Mouse, UPS) for clerk	GX960SFF	$1,700	1	**$1,700**
Cabling, various including 9pr		$300	1	**$300**
Blue Recording Light		$500	1	**$500**
CourtSmart Software (includes one full client license for courtroom clerk)		$8,800	1	**$8,800**
Total Costs		**$20,589.00**		**$23,363.00**

*Information provided to Chief Judge Charles Smith, co-chair of the DART Committee, during his visit to the court in Anchorage (September 2009)